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# Autoclave and Research Resource Facility

## Facility Equipment

- **Amsco Century SG-120 Scientific Gravity Sterilizers:** Manufactured by Steris. Three Sterilizers are installed in autoclave rooms, S/N 0104601-12 (room DV4032), S/N 0105701-32 (room DV3027) and S/N 13209904 (DV2031). The touch screen control panel makes them easy to operate; they come with six pre-designed autoclave cycles for liquid and solid materials, with a temperature range of 120-130C; and a chamber capacity of 20X20X38" ( WxHxD).
- **Milli-Q Reference Water Systems:** Each autoclave room, DV3027 and DV4032, is equipped with one unit. The systems deliver Type 1 pure water customized to meet a broad range of research needs. Specifications: Resistivity 18.2 MΩ.cm at 25°C; TOC (Total Organic Carbon) ≤5 ppb; Particulates (> 0.22um) < 1 particulate/ml; Bacteria < 1cfu; RNase < 0.01 ng/ml; DNase < 4pg/ml; flow rate up to 2L/min.
- **Lab-ware Washer:** Located in DV4032. Manufacturer: Labconco, Model: SteamScrubber 4400320, under-bench. It features top and bottom racks that accommodate basket inserts for a wide variety of beakers and other wide-mouth laboratory glassware. It also includes an extra lower spindle rack for long cylinders and bigger bottles. Additional accessories include test tube holders for 10-13mm OD TB, test tube holders for 22-25mm OD TB and DNA sequencing plate inserts.
- **Ice Makers:** Hoshizaki ice maker, model F-450MAJ, is located in DV4032. It produces "snow" style flaked ice with a maximum 493 lb production/24 hours and an ice bin capacity of 230 lbs. Rooms DV3027 and DV2031 each have one Manitowoc ice maker and one Hoshizaki ice maker, both of which have similar ice production and ice bin storage capacity to Hoshizaki F-450MAJ.
- **Fisher Scientific Isotemp Oven:** Model 637G, located in DV4032. Temperature range: 50 to 225°C; control sensitivity 0.5C+/-; chamber size (WxDxH) 18x18x20", chamber volume 3.8cu ft.
- **Fisher Isotemp Incubator Oven:** Model 350D, located in DV 3027. Temperature range: up to 80°C; chamber size (WxDxH) 19x16x18".

- **Two walk-in 5C Fridge Rooms:** They are served as shared resources at UTM research community for sample storage. They also provide table benches for small instrument operations that require low temperature settings. Honeywell remote monitoring system is used for monitoring their temperature.

Item ID	Location	Manufacturer	Model	Serial #
1012-02CR	DV1012	CANTROL Environmental System Limited	CES-4	C2213-2
3028-03CR	DV3028	CANTROL Environmental System Limited	CES-4	C2213-6

Specifications:

1. Temperature control range 4°C+/- 1.5°C
2. High/Low temperature limits are controlled by A19 Series Electronic Controls.
3. Temperature setting and display are controlled by Yokogawa UT152 Controller.
4. Rooms size: 1012-02CR 11'-6"x 10'-4"; 3028-03CR 11'-6"x 6'-5"

- **Two Walk-in -20C Freezer Rooms:** They are shared sample storage rooms. The temperature is remotely monitored by Honeywell system. Temperature alarms can be sent to individual users' email addresses upon request.

Item ID	Location	Manufacturer	Model	Serial #
1012-01FZR	DV1012	CANTROL Environmental System Limited	CES-18	C2213-1
3028-02FZR	DV3028	CANTROL Environmental System Limited	CES-20	C2213-10

Specifications of CES-18:

1. Temperature control range -18C +/-1.5C
2. Temperature rises 6°C to 8°C during defrosting.
3. High/Low temperature limits are controlled by A19 Series Electronic Controls.
4. Temperature setting and display are controlled by Yokogawa UT152 Controller.
5. Two operation systems, once the temperature on primary system fails, it switches to Backup system automatically.
6. Room size: 11'-6"x 10'-4"

Specifications of CES-20:

1. Temperature control range -18°C +/-1.5°C
2. Temperature rises 6°C to 8°C during defrosting.
3. High/Low temperature limits are controlled by A19 Series Electronic Controls.

4. Temperature setting and display are controlled by Yokogawa UT152 Controller.
5. Room size: 11'-6" x 6'-5"

- **Six Ultra-Low Freezers:** They are shared spaces for sample storage. The temperature is remotely monitored by Honeywell system and alarms can be sent to individual users upon request.

Item	Location	Manufacturer	Model	Serial #
1012-12UFZ	DV1012	Eppendorf ( New Brunswick)	U570-86	F570DJ460254
3028-10UFZ	DV3028	Eppendorf	F570-86	F570GN9 13538
3028-13UFZ	DV3028	Fisher Scientific	IUE40086FD	1127979701221026
3028-14 UFZ	DV3028	Revco Scientific Inc.	UTL1340-3-A14	Z02G360894-ZG
3028-16UFZ	DV3028	Revco Technology	UTL1786-5-A35	X22L-552602-YL
3028-17UFZ	DV3028	Eppendorf	F570-86	F570IP030180

Specifications of Eppendorf U570-86

1. Temperature range: -50°C - -86°C.
2. Upright, 5 compartment shelving system
3. Capacity 570L. Each compartment contains 5 sample racks; each rack holds 16 square sample boxes at 2" height (5x5x2").
4. Pull down time from +25°C to -85°C: 5.5 hours
5. Power supply: 115V, 16.5A, 60Hz, 1 phase

Specifications of Eppendorf F570-86

1. Temperature range -50C to -86C.
2. Upright, 5 compartment shelving system
3. Capacity 570L. Each compartment contains 5 sample racks; each rack holds 16 square sample boxes of 2" height (5x5x2").
4. Cooling time from 20°C to -80°C: 4.7 hours
5. Power supply: 115V, 16.5A, 60Hz, 1 phase

Specification of Fisher Scientific IUE40086FD

1. Upright, 5 compartments
2. Operating temperature range -50 °C to -80°C.

3. Capacity 549L. Each compartment contains 4 sample racks and each rack holds 20 sample boxes of 2" height.
4. Power supply: 208-230V/60Hz

Specifications of Revco UTL13403-A14:

1. Upright
2. Maximum low temperature -45°C
3. 5 interior doors and 4 shelves installed (can be adjusted to 5 shelves)
4. Each shelf contains 4 sample racks and each rack holds 16 square sample boxes of 2" height (5x5x2")
5. Power supply: 115V, 10.5 amps 1 phase, 60Hz.

Specifications of Revco-UTL1786-5-A35:

1. Upright
2. Maximum low temperature -86C.
3. 5 interior doors and 4 shelves installed (can be adjusted to 5 shelves.)
4. Each shelf contains 4 sample racks and each rack has 16 places for 2" square sample boxes (5x5x2).
5. Power supply: 115V,16amp, 1 phase, 60H